Pesticide Exposure Surveillance Program (PESP)

1. **What is the purpose of the surveillance program?**

   The primary purpose of the surveillance program is to identify the magnitude and distribution of acute pesticide-related illness and injury and to implement prevention and intervention activities aimed at reducing the occurrence of pesticide poisonings.

2. **What type of cases are investigated?**

The Florida Department of Health/Pesticide Exposure Surveillance Program (DOH/PESP) investigates reports of acute adverse health effects resulting from exposure to pesticides. The types of reports that are investigated include:

- Exposures to insecticides, herbicides, fungicides, rodenticides, and any other pesticides defined under federal law (FIFRA-Federal Insecticide, Fungicide, and Rodenticide Act - http://www.epa.gov/pesticides/regulating/laws.htm)
- Workplace and residential exposures
- Exposures in public places (e.g. roadways, parks etc.)
- Workplace exposures to antimicrobials (e.g. detergents)
- Exposures to general-use (over-the-counter pesticides) and restricted-use pesticides
- Exposures involving emergency response
- Reports of pesticide-related symptoms such as skin and eye injuries, and allergic reactions

3. **Who must report?**

The Florida reporting rule 64D-3 is typically aimed at licensed health care providers, physicians and laboratory personnel, http://www./www.doh.state.fl.us/environment/community/pesticide/pdfs/rep_dis_list (353K PDF). The program however accepts reports from other entities such as the exposed person(s)/witnesses, legal services, farmworkers advocacy groups, other state agencies, media, etc. Report can be made to the Department of Health at **(850) 245-4277/1-800-606-5810** or your local county health department.

4. **How are investigations conducted?**

The typical case investigation involves:

A. Interviews with symptomatic persons and/or witnesses to get information on:
   - When the exposure occurred
   - Type of symptoms experienced
   - The activity of the exposed person(s)
   - Where the exposure occurred (e.g. work, home, school, roadway, etc.)
   - If medical care was sought and what type (e.g. skin decontamination, airway protection, etc.)
   - If other persons were exposed

B. Review of the exposed person(s) medical records and clinical or laboratory test results:
   - Determine type of test done
   - Interpretation of test results
   - Determine medical diagnosis and treatment
   - Determine other possible cause if not pesticide poisoning

C. Review of pesticide field investigation or environmental laboratory analysis records from regulatory agent to:
   - Determine if an pesticide application did occur and the possibility of exposure
   - Determine how the exposure actually occurred
   - Confirm the pesticide product involved in the exposure

Interviews may be conducted by phone or in person. DOH/PESP does not have a laboratory for processing environmental and biological samples, but will review the results of tests conducted by approved laboratories operating within the state. Case investigation may be done in collaboration with the regulatory agency (e.g. Department of Agriculture and Consumer Services) especially when there is a suspected pesticide use violation.

5. **How are cases classified?**

DOH/PESP uses a standard protocol for classifying cases as to the likelihood that the symptoms reported are related to a pesticide exposure. This protocol was developed by the National Institutes of Occupational Safety and Health/Sentinel Event Notification System for Occupational Risk (NIOSH/SENSOR) program and is used by most states that conduct pesticide illness/injury surveillance. The full protocol is available at the NIOSH website / http://www.cdc.gov/niosh/topics/pesticides/.

All cases investigated by DOH/PESP are subjected to internal and NIOSH review to assure accuracy in coding and case classification. The case classification criteria for acute pesticide-related illness and injury are based on evidence of exposure, presence of adverse health effects and casual relationship between the symptoms and the pesticide toxicology. Cases are classified as definite, probable, possible, suspicious, unlikely, insufficient information, and not a case. For a detailed description of the classification categories refer to the Classification of Acute Pesticide Illness and Injury (page 3 below).

6. **How is the surveillance data managed?**

Information collected during case investigations is entered into the Pesticide Incident Monitoring System (PIMS) database. The information in PIMS database can be queried by variables such as demographic information of the exposed, county of exposure, site of exposure, pesticide type, pesticide active ingredient, signs/symptoms, case classification and severity type. Analysis of the PIMS data is conducted and published annually on the program' s website.
The database contains personal identifiers and medical information, and is therefore not open to public. The information on the database can only be access by the program staff. Under Florida law, email addresses are public record. If you do not want your email address released in response to a public records request, do not send electronic mail to this entity. Instead, contact this office by phone in writing. You may contact the program coordinatorfor additional data information on a documented pesticide exposure.

7. **What are the limitations of the surveillance data?**

The data collected by DOH/PESP have limitations because:

A. The surveillance program investigates only acute illnesses and injuries. Acute illness/injury usually occur between 24-48 hours after the exposure. For surveillance purpose, this period may be extended up to three months for the investigation of sub-acute cases. The program however, do not routinely investigate cases of chronic illness/injury. These types of effects occur after long-term exposures and include cancer, birth defects, developmental abnormalities, and neurological diseases. Chronic effects of pesticide exposure require investigative tools and resources that are not utilized by a passive surveillance system. The DOH/PESP also does not have the resources to conduct such studies at this time. The program refers chronic cases to other DOH programs that study these latent effects of pesticide exposures and collaborates on investigations as needed.
B. Not all cases of pesticide illness or injury are reported to the program. These instances exist if the ill/injured person does not seek health care, if the person receives health care but the health care provider fails to recognize it as pesticide-related illness, or if the health care provider does not report the case as required. Under-reporting is a common problem among all states that monitor pesticide-related illness and injury. In general, passive surveillance systems usually do not capture all cases as they rely almost exclusively on reporting.
Information received on pesticide exposure incidents may be insufficient to investigate and/or classify the case.
C. DOH/PESP staff may not be able to locate a seasonal or migrant farm worker for interview or persons may not have sought medical care or they may not have considered it necessary to report a mild exposure incidents. In some instances the identity of the pesticide product may be unknown. Such cases are entered into the PIMS database but are not included in the analyses that are posted on the pesticide website.

8. **How is the surveillance data used?**

A. The DOH/PESP analyses the data collected on pesticide exposures to determine risk factors, to identify population at risk, to identify areas for further investigation and to determine prevention and intervention activities that are needed to stop further exposures. The program intervenes through education and outreach activities. The program also make recommendations for regulatory actions and/changes.
B. The aggregated data (without case identifiers) is reported annually to NIOSH and compared to that of the other states participating in the NIOSH/SENSOR program. The data is then shared with other federal agencies such as the Environment Protection Agency (EPA) and the National Center for Environmental Health (NCEH) at the Centers for Disease Control and Prevention (CDC). This helps in the assessment of pesticide poisonings from a national prospective and facilitate the sharing of knowledge and expertise among participating states.

Classification of Acute Pesticide-Related Illness and Injury

Classification Category	Classification Description
Definite	Presence of objective evidence which confirms the pesticide exposure and health effects and the temporally-related illness is consistent with the known toxicology of the pesticide. Objective evidence of the exposure includes residues detected in the environment or positive results from biological testing for presence of toxic response to the pesticides and/or its breakdown products in the body of the exposed person. Objective evidence of health effects includes documented observation by a health care provider of clinical signs.
Probable	Presence of objective evidence of either the pesticide exposure or the health effects and the temporally-related illness is consistent with the known toxicology of the pesticide.
Possible	Presence of only subjective evidence of exposure and the temporally-related symptoms are consistent with the known toxicology of the pesticide. The exposure may be reported by the case and/or a witness, and may be supported by pesticide application records. All symptoms were self-reported and may not have been documented by a health care provider.
Suspicious	Subjective or objective evidence of both the pesticide exposure and the health effects are available. However, there is insufficient toxicological or exposure information available to determine whether a casual relationship exists between the pesticide exposure and the health effects.
Unlikely	The relationship between the reported pesticide exposure and health effect is not consistent with the known toxicology of the pesticide.
Insufficient Information	Absence of sufficient evidence about the exposure or the health effects to determine a cause and effect relationship.
Not a case	An alleged pesticide exposure with no reported health effects (asymptomatic), or presence of health effects that are not related to the pesticide exposure.